

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 07 JUL 2004

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Applicant's or agent's file reference P045189PCT AHO/do	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/NL 03/00547	International filing date (day/month/year) 30.07.2003	Priority date (day/month/year) 30.07.2002
International Patent Classification (IPC) or both national classification and IPC G01N33/38		
Applicant XPAR VISION B.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 19.11.2003	Date of completion of this report 08.07.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Joyce, D Telephone No. +31 70 340-3093



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NL 03/00547**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-22 received on 21.06.2004 with letter of 18.06.2004

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NL 03/00547**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-22
	No: Claims	
Inventive step (IS)	Yes: Claims	1-22
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NL 03/00547

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: EP-A-0 643 297 (TCE CONSULTANCY & ENG) 15 March 1995 (1995-03-15)
cited in the application
- D2: US-A-5 220 403 (BATCHELDER JOHN S ET AL) 15 June 1993 (1993-06-15)
- D3: WO 02/28954 A (BACH HANS JUERGEN ; HOLLEY WOLFGANG (DE);
FRAUNHOFER GES FORSCHUNG) 11 April 2002 (2002-04-11)

Article 33 PCT:

1.1 The document D1 is regarded as being the closest prior art to the subject-matter of independent claims 1 and 13, and discloses (the references in parentheses applying to this document):

1.2 Analytical system for analysing and controlling a production process for glass products, the production process comprising a shaping process and a cooling process and the analytical system comprising an infrared-sensitive measurement system and a processor communicating therewith (Col 1 line 1-18),
the infrared-sensitive measurement system being equipped to measure infrared radiation originating from hot glass products immediately after the shaping process for the glass products and the processor being equipped to determine a heat distribution in the glass products on the basis of information determined by the measurement system (Col 2 line 7-18).

1.3 From which the subject-matter of independent claims 1 and 13 differs in that the infrared-sensitive measurement system is sensitive only to radiation in the Near-Infrared (NIR) region.

1.4 The subject-matter of independent claims 1 and 13 is therefore novel and satisfies the criteria of Article 33(2) PCT.

1.5 The objective problem to be solved by the present invention may therefore be

regarded as how to determine changes in the interior of the glass wall beneath the surface layer.

1.6 During the shaping and cooling processes associated with glass production, the heat distribution emanating from the interior wall of the glass product as it cools produces information relating to its purity, thickness and temperature. In the prior art technique, infrared sensors pick up the heat distribution from the glass product as it cools, but only from the surface layer, which completely obscures the minute radiation fluctuations emanating from the interior wall of the glass product.

1.7 By providing an analytical system operating in the Near-Infra-Red spectrum the inventor has circumvented the associated problems with Infrared measurement, namely the absorption of IR light of long wavelengths by the interior glass wall. By operating in the Near-Infra-Red only, measurements can be accurately correlated to the amount of heat in the interior of the glass wall.

1.8 None of the cited or consulted prior art recognizes the above problem nor does it suggest the present solution. Document D2 does disclose an NIR measurement system but this is relation to semiconductor wafers, and this document details that a source of NIR must be actively projected onto the object, whereas in the present application it is the NIR emanating from the hot interior glass wall which is caught by an NIR sensitive measurement system.

1.9 As neither problem nor solution are considered obvious per se, the claimed analytical system and corresponding method are seen to involve an inventive step in the sense of Article 33(3) PCT.

2.0 The industrial applicability of the system of claim 1 and the method of claim 13 is evident, so that therefore all requirements of Article 33 PCT are met by independent claims 1 and 13.

2.1 Dependent claims 2-12, and 14-22 respectively, define further refinements of the novel and inventive idea of independent claims 1 and 13, and hence also meet the requirements of Article 33 PCT for the same reasons as given above.

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